

1 AAVYQRPDHPQRPRRGHCVTDSVYVYSGMOLKLTQGNKMLCTCLGNGVSCQETAVTQT 60

1 AAVTQPRPRPRRYGHCYTDGSGVSVGMOLKLTQGNKOMLCTCLGNGVSCQETAVQT 60

QY 1 AAVYQPPHPPGCHCTDSGVVYSGVMKMLKTGKMKLCTCLGNGVSCQETAVTQT 60  
DB 291 AAVYQPPHPPGCHCTDSGVVYSGVMKMLKTGKMKLCTCLGNGVSCQETAVTQT 350  
QY 61 YGNSNGEPCVLPFTYNGRTFYSCCTEGRDGHLKSTTSNVEDQKXSFCTDHTVLVQT 120  
DB 351 YGNSNGEPCVLPFTYNGRTFYSCCTEGRDGHLKSTTSNVEDQKXSFCTDHTVLVQT 410  
QY 121 RGSNSGALCHFPFLYNNHNTDCTSEGRDNMKKCTTONTADQKFGCPMAAHEEIC 180  
DB 411 OGSNSGALCHFPFLYNNHNTDCTSEGRDNMKKCTTONTADQKFGCPMAAHEEIC 470  
QY 181 TTNEGVMYRIGDQMDKHDMGHNKCTCVNGRGEMTCIAVSQLRDQCIYDDITVYVNDT 240  
DB 471 TTNEGVMYRIGDQMDKHDMGHNKCTCVNGRGEMTCIAVSQLRDQCIYDDITVYVNDT 530  
QY 241 FHKRHEEGHMLNCTCFGQGRGKMKCDPVQCCDSEGTFTYQIGDSMEKYHGVRYOCYCY 300  
DB 531 FHKRHEEGHMLNCTCFGQGRGKMKCDPVQCCDSEGTFTYQIGDSMEKYHGVRYOCYCY 590  
QY 301 GRGIGEMHCOPLOTTPSSSGPVEVFTETPSQPNSHPIQW 340  
DB 591 GRGIGEMHCOPLOTTPSSSGPVEVFTETPSQPNSHPIQW 630

## RESULT 2

US-08-551-356-2

Sequence 2, Application US/08551356

Patent No. 5830700

GENERAL INFORMATION:

APPLICANT: Iranl, Meher

TITLE OF INVENTION: HYBRID CROSS-LINKING PROTEINS

NUMBER OF SEQUENCES: 14

CORRESPONDENCE ADDRESS:

ADDRESSEE: Zymogenetics, Inc.

STREET: 4225 Roosevelt Way, N.E.

CITY: Seattle

STATE: WA

COUNTRY: USA

ZIP: 98105

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/551.356

FILING DATE:

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/349.762

FILING DATE:

APPLICATION NUMBER: US/07/998.271

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: HOLLY, Julie A

REGISTRATION NUMBER: 33-246

REFERENCE/DOCKET NUMBER: 92-26

TELECOMMUNICATION INFORMATION:

TELEPHONE: 206-547-8080 ext 322

TELEFAX: 206-548-2329

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 2446 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-551-356-2

QY 1 AAVYQPPHPPGCHCTDSGVVYSGVMKMLKTGKMKLCTCLGNGVSCQETAVTQT 60  
DB 291 AAVYQPPHPPGCHCTDSGVVYSGVMKMLKTGKMKLCTCLGNGVSCQETAVTQT 350  
QY 61 YGNSNGEPCVLPFTYNGRTFYSCCTEGRDGHLKSTTSNVEDQKXSFCTDHTVLVQT 120  
DB 351 YGNSNGEPCVLPFTYNGRTFYSCCTEGRDGHLKSTTSNVEDQKXSFCTDHTVLVQT 410  
QY 121 RGSNSGALCHFPFLYNNHNTDCTSEGRDNMKKCTTONTADQKFGCPMAAHEEIC 180  
DB 411 OGSNSGALCHFPFLYNNHNTDCTSEGRDNMKKCTTONTADQKFGCPMAAHEEIC 470  
QY 181 TTNEGVMYRIGDQMDKHDMGHNKCTCVNGRGEMTCIAVSQLRDQCIYDDITVYVNDT 240  
DB 471 TTNEGVMYRIGDQMDKHDMGHNKCTCVNGRGEMTCIAVSQLRDQCIYDDITVYVNDT 530  
QY 241 FHKRHEEGHMLNCTCFGQGRGKMKCDPVQCCDSEGTFTYQIGDSMEKYHGVRYOCYCY 300  
DB 531 FHKRHEEGHMLNCTCFGQGRGKMKCDPVQCCDSEGTFTYQIGDSMEKYHGVRYOCYCY 590  
QY 301 GRGIGEMHCOPLOTTPSSSGPVEVFTETPSQPNSHPIQW 340  
DB 591 GRGIGEMHCOPLOTTPSSSGPVEVFTETPSQPNSHPIQW 630

## RESULT 3

PCT-US93-12687-2

Sequence 2, Application PC/TUS9312687

GENERAL INFORMATION:

APPLICANT: Iranl, Meher H.

TITLE OF INVENTION: HYBRID CROSS-LINKING PROTEINS

NUMBER OF SEQUENCES: 14

CORRESPONDENCE ADDRESS:

ADDRESSEE: Zymogenetics, Inc.

STREET: 4225 Roosevelt Way, N.E.

CITY: Seattle

STATE: WA

COUNTRY: USA

ZIP: 98105

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US93/12687

FILING DATE:

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/998.271

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: PARKER, Gary E

REGISTRATION NUMBER: 31-648

REFERENCE/DOCKET NUMBER: 92-26PC

TELECOMMUNICATION INFORMATION:

TELEPHONE: 206-547-8080 ext 322

TELEFAX: 206-548-2329

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 2446 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

PCT-US93-12687-2

Query Match 99.58; Score 1978; DB 2; Length 2446;  
Best Local Similarity 99.48; Pred. No. 3.3e-174;  
Matches 338; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

6

Query Match 99.58; Score 1978; DB 4; Length 2446;  
Best Local Similarity 99.48; Pred. No. 3.3e-174;  
Matches 338; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY

OM protein - protein search, using SW model

Run on: October 4, 2000, 18:05:04 ; Search time 49.12 Seconds  
(Without alignments) 163.951 Million cell updates/sec

Title: US-09-507-691-1\_COPY\_2\_341

Perfect score: 1988  
Sequence: 1 AAVYQPPHPPGCHVCT.....PVEVFTETSPQNSHP10M 340

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 188963 seqs, 23686106 residues

Total number of hits satisfying chosen parameters: 188963

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : A\_Geneseq\_36.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Length	DB ID	Description
1	1979	99.5	2386	1 W63171 Amino acid sequence
2	1979	99.5	2477	1 W95595 Human fibronectin.
3	1978	99.5	2324	1 R92778 Human fibronectin.
4	1978	99.5	2327	1 P70373 Human fibronectin
5	1978	99.5	2446	1 R60021 Fibrogen- $\alpha$ .
6	1973	99.2	2327	1 R15468 Human fibronectin.
7	386	19.4	663	1 W41227 Chicken matrix met
8	382.5	19.2	631	1 P96143 Sequence of human
9	382.5	19.2	631	1 W41226 Human mature matrl
10	382.5	19.2	660	1 R06420 Type IV collagenas
11	382.5	19.2	663	1 W41111 Chicken matrix met
12	381.5	19.2	631	1 P91139 Human type IV coll
13	380	19.1	429	1 W41112 Human matrix met
14	379	19.1	631	1 R07969 Complete type IV c
15	374	18.8	707	1 R07077 92-kDa human type
16	371	18.7	65	1 W62372 Antithrombotic pep
17	348	17.5	60	1 W62371 Antithrombotic pep
18	290	14.6	48	1 W62375 Antithrombotic pep
19	278	14.0	48	1 W62373 Antithrombotic pep
20	258	13.0	43	1 W62374 Antithrombotic pep
21	240	12.1	411	1 R11672 Cell adhesive and
22	239.5	12.0	422	1 R11666 Cell adhesive and
23	239.5	12.0	409	1 R11675 Cell adhesive and
24	237	11.9	409	1 R12784 Fibrin-binding pol
25	232	11.7	133	1 R12783 Fibrin-binding pol
26	232	11.7	144	1 R12782 Fibrin-binding pol
27	232	11.7	145	1 R12781 Fibrin-binding pol
28	232	11.7	145	1 R12781 Fibrin-binding pol
29	232	11.7	188	1 R42169 Haemopoietic stem
30	232	11.7	192	1 P91467 Peptide with fibrin
31	232	11.7	192	1 W01635 Functional fragmen
32	232	11.7	192	1 W44859 Human fibronectin
33	216.5	10.9	366	1 R11674 Cell adhesive and

34	215	10.8	377	1 R11668 Cell adhesive and
35	214	10.8	375	1 R11671 Cell adhesive and
36	206	10.4	37	1 W62370 Antithrombotic pep
37	195.5	9.8	1463	1 R63575 Bovine phospholip
38	195.5	9.8	1463	1 R63575 Bovine phospholip
39	193.5	9.7	1479	1 W44119 Human type C lecti
40	193	9.7	1456	1 R24033 Soluble mannose re
41	187	9.4	1479	1 W44118 Murine type C lect
42	170	8.6	655	1 R89197 Human hepatocellu
43	163	8.2	655	1 R53962 Hepatocyte growth
44	163	7.2	1722	1 W38429 Human dendritic ce
45	137.5	6.9	1723	1 W0645 Mouse DEC-205. L19

ALIGNMENTS

RESULT 1  
ID W63171  
AC W63171; 27-OCT-1998 (first entry)  
DE Amino acid sequence of fibronectin.  
KW Mast cell protease; MCP: mouse; inhibitor; peptide substrate; asthma;  
KW Trypsin-6 protein; inflammatory disorder; allergic rhinitis; urticaria;  
KW Anticollagenase; inflammatory disorder; atopic dermatitis; anaphylaxis;  
KW hyperproliferative skin disease; peptic ulcer; hyperresponsiveness;  
KW Inflammatory skin condition; fibronectin.  
OS Mus sp.  
PN W09833812-AL.  
PD 06-AUG-1998.  
PF 30-JAN-1998; 001865.  
PR 05-FEB-1997; US-037090.  
PA (BCHM) BRIGHAM & WOMENS HOSPITAL.  
PI Huang C, Stevens RL;  
DR MPI: 98-437390/37.  
PT Trypsin-6 complex inhibitory peptides - used to treat mast  
PR cell-mediated inflammatory disorders e.g. asthma  
PS Disclosure: Pages 36-42; 69pp; English.  
CC This is the amino acid sequence of fibronectin. The trypsin-6 complex  
CC inhibitory peptides of the invention comprise the sequence of a fragment  
CC of the fibronectin (residues 1351-1356). Sequences shown in W63160 to  
CC W63169 represent mouse mast cell protease (MCP-6) inhibitory peptides.  
CC These peptides which are trypsin-6 complex inhibitors, can be used for  
CC treating a mast cell-mediated inflammatory disorder. The inhibitors can  
CC be used to treat inflammatory disorders including asthma, allergic  
CC rhinitis, urticaria and anticollagenase, eczematous dermatitis (atopic  
CC dermatitis), anaphylaxis, hyperproliferative skin disease, peptic ulcers,  
CC inflammatory bowel disorder, hyperresponsiveness and inflammatory skin  
CC conditions.  
SQ Sequence 2386 AA:

Query Match 99.5%; Score 1979; DB 1; Length 2386;  
Best Local Similarity 99.4%; Pred. No. 1.3e-141;  
Matches 338; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 AAVYQPPHPPGCHVCTDSGVVYVGMQMLKTQGNKMLCTGAGVSCQETAVYVOT 60  
DB 291 AAVYQPPHPPGCHVCTDSGVVYVGMQMLKTQGNKMLCTGAGVSCQETAVYVOT 350  
QY 61 YGNSNCEPCVLPFTYNGRTFYSCCTEGRQDGLMCTSYNYDQKYSFCTDHTVLVOT 120  
DB 351 YGNSNCEPCVLPFTYNGRTFYSCCTEGRQDGLMCTSYNYDQKYSFCTDHTVLVOT 410  
QY 121 RGNSKNGALCHFFPLNNNNYDCTSEGRBNKMKCTGTONYADAKRFQFMAHEITC 180  
DB 411 OGNSKNGALCHFFPLNNNNYDCTSEGRBNKMKCTGTONYADAKRFQFMAHEITC 470  
QY 181 TTNGSVYVRIGDQMDKQHDGKHMNCTGVCNGRDEMTICVYASLRQOCIVDDITVNVDT 240  
DB 471 TTNGSVYVRIGDQMDKQHDGKHMNCTGVCNGRDEMTICVYASLRQOCIVDDITVNVDT 530

OM protein - protein search, using sw model

Run on: October 4, 2000, 18:01:21 ; Search time 44.67 seconds  
(without alignments)  
127.576 Million cell updates/sec

Title: US-09-507-691-1\_COPY\_2\_341

Sequence: 1 AAVQPPHPQPPYGHCVT.....PVEVFITETPSQNSHPIDM 340

Scoring table:

BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 164575 seqs, 16761186 residues

Total number of hits satisfying chosen parameters: 164575

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database :

Issued\_Patents\_AA:\*  
1: /cgnl\_7/ptodata/1/1aa/5A\_COMB.pep:\*  
2: /cgnl\_7/ptodata/1/1aa/5B\_COMB.pep:\*  
3: /cgnl\_7/ptodata/1/1aa/6\_COMB.pep:\*  
4: /cgnl\_7/ptodata/1/1aa/PCRTUS\_COMB.pep:\*  
5: /cgnl\_7/ptodata/1/1aa/Backfile1.pep:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1979	99.5	2386	2	US-09-016-366A-12
2	1978	99.5	2446	2	US-08-551-356-2
3	1978	99.5	2446	4	PCT-US93-12687-2
4	1973	99.2	2327	5	5455158-1
5	1971	99.1	2324	1	US-08-283-857-1
6	1971	99.1	2324	4	PCT-US95-09819-1
7	1959	98.5	2231	1	US-08-153-799-16
8	382.5	19.2	660	3	US-08-704-711A-18
9	374	18.8	707	3	US-08-704-711A-19
10	371	18.7	65	2	US-08-982-597A-19
11	371	18.7	65	3	US-09-136-218-19
12	348	17.5	60	2	US-08-982-597A-18
13	348	17.5	60	3	US-09-136-218-18
14	290	14.6	48	2	US-08-982-597A-22
15	290	14.6	48	3	US-09-136-218-22
16	278	14.0	48	2	US-08-982-597A-20
17	278	14.0	48	3	US-09-136-218-20
18	258	13.0	43	2	US-08-982-597A-21
19	258	13.0	43	3	US-09-136-218-21
20	243	12.2	474	2	US-08-836-854-9
21	239.5	12.0	422	2	US-08-142-449B-14
22	232	11.7	188	1	US-08-982-597A-17
23	206	10.4	37	2	US-08-982-597A-17
24	206	10.4	37	3	US-09-136-218-17
25	195.5	9.8	1455	3	US-08-840-062-5
26	195.5	9.8	1463	1	US-08-820-603A-11
27	193.5	9.7	1479	3	US-08-840-062-4
28	187	9.4	1479	3	US-08-840-062-2

29	180.5	9.1	1487	3	US-08-840-062-7	Sequence 7, Appl 1
30	170	8.6	655	1	US-08-148-910-12	Sequence 12, Appl 1
31	170	8.6	655	1	US-08-448-937A-12	Sequence 12, Appl 1
32	140.5	7.1	1449	3	US-08-840-062-6	Sequence 6, Appl 1
33	130	6.5	24	2	US-08-982-597A-23	Sequence 23, Appl 1
34	130	6.5	24	3	US-09-136-218-23	Sequence 23, Appl 1
35	127.5	6.4	1833	3	US-08-479-722B-2	Sequence 2, Appl 1
36	127.5	6.4	1833	4	PCT-US95-02251-18	Sequence 18, Appl 1
37	123	6.2	96	2	US-08-717-169-2	Sequence 2, Appl 1
38	121.5	6.1	2214	1	US-08-727-034-7	Sequence 7, Appl 1
39	120.5	6.1	2213	1	US-08-727-034-3	Sequence 3, Appl 1
40	116.5	5.9	574	5	5378464-3	Patent No. 5378464
41	114.5	5.8	2556	1	US-08-185-432-17	Sequence 17, Appl 1
42	114.5	5.8	2556	1	US-08-083-590A-20	Sequence 20, Appl 1
43	114.5	5.8	2556	3	US-08-532-384-20	Sequence 20, Appl 1
44	114	5.7	810	2	US-08-820-170A-34	Sequence 34, Appl 1
45	114	5.7	810	3	US-09-055-699-34	Sequence 34, Appl 1

#### ALIGNMENTS

RESULT 1  
US-09-016-366A-12  
Sequence 12, Application US/09016366A  
Patent No. 5455431  
GENERAL INFORMATION:  
APPLICANT: Stevens, Richard L.  
TITLE OF INVENTION: MAST CELL PROTEASE PEPTIDE  
TITLE OF INVENTION: INHIBITORS  
NUMBER OF SEQUENCES: 65  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Wolf, Greenfield & Sacks, P.C.  
STREET: 600 Atlantic Avenue  
CITY: Boston  
STATE: MA  
COUNTRY: U.S.A.  
ZIP: 02210-2211  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FASTSEQ for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/016,366A  
FILING DATE: January 30, 1998  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 60/037,090  
FILING DATE: 05-FEB-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: Plummer, Elizabeth R.  
REGISTRATION NUMBER: 36,637  
REFERENCE/DOCKET NUMBER: B0801/7093  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-720-3500  
TELEFAX: 617-720-2441  
TELEX:  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 2386 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-016-366A-12

Query Match 99.5% Score 1979; DB 2; Length 2386;  
Best Local Similarity 99.4% Pred. No. 2.6e-174;  
Matches 338; Conservative 1; Mismatches 1; Indels 0; Gaps 0;